

TITLE 83: PUBLIC UTILITIES
CHAPTER I: ILLINOIS COMMERCE COMMISSION
SUBCHAPTER C: ELECTRIC UTILITIES

PART XXX
INTERCONNECTION OF DISTRIBUTED RESOURCES
TO ELECTRIC UTILITY DISTRIBUTION SYSTEMS

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Section XXX.010 Definitions

"Affected Systems" means any electric system not owned or operated by the interconnection provider, that is either directly or indirectly connected to the interconnection provider's electric system and could be adversely affected by the interconnection and parallel operation of the interconnection customer's distributed resource.

"Aggregate Generation Capacity" means the sum of the generating capacities of all distributed resources, as stated on their nameplates, connected to a circuit or circuit line section. [The term is used on pages 7 & 8.]

"Agreement" means an interconnection and parallel operation agreement for a distributed resource by and between the interconnection provider and the interconnection customer.

"Business Day" means Monday through Friday except for State of Illinois holidays.

"Distributed Resource" means equipment that can become a source of electric power, including but not limited to generators and/or energy storage technologies, that is not connected to a bulk power transmission system. [These rules do not apply to wholesale generators.]

"Distribution Line or System" means any electric line or system with a voltage less than 69kV. [NOTE: Some utilities with line operating from 25kV to 69kV refer to these lines as sub-transmission lines, as they are utilized to provide bulk power to rural areas.]

"Electric System" means an electric transmission or distribution system.

"Facilities Study" means a study, executed in accordance with Section XXX.120 that determines specific changes to the electric ~~transmission or distribution system(s)~~ necessary to interconnect a distributed generation equipment resource, and to determine the cost of those changes. ~~The facilities study shall also include suggested changes to the interconnection customer's proposed distributed resource if the interconnection provider believes these changes would reduce interconnection costs. [It is important not to put interconnection providers in a position of forced consultancy, of having to advise an interconnection customer about changes to the customer's equipment. That is not a business the utility typically engages in and exposes the utility to potential liability claims by the interconnection customers.]~~

"Feasibility/Impact Study" means a study, executed in accordance with Section XXX.110 that identifies the effect(s) of interconnecting a distributed resource to an interconnection provider's electric system, including identification of potential violations and the effect the interconnection would have on system reliability. The feasibility/impact study also estimates the magnitude of costs associated with facilities and/or system modifications necessary for completing the interconnection.

"FERC" means the Federal Energy Regulatory Commission.

"Generation Capacity" means the capability of the distributed resource as stated on its nameplate. [This would eliminate any uncertainty about determining the value and the ability of a distributed resource to provide power to an electric system.]

"IEEE" means Institute of Electrical and Electronics Engineers, Inc., a non-profit technical professional organization with members in 150 countries, responsible for technical publishing, conferences, and consensus-based standards activities.

"Interconnection Customer" means any entity proposing to interconnect a distributed resource to an interconnection provider's system or any entity that has entered into a valid interconnection agreement with an interconnection provider.

"Interconnection Provider" means a public utility as defined by the Public Utilities Act [220 ILCS 5], that owns and/or operates an electric system to which the interconnection customer desires to interconnect a distributed resource, or has interconnected a distributed resource.

"Line Section" means a section of the distribution system between two sectionalizing devices in the area electric power system.

"Parallel Operation" means the operation of a distributed resource connected to an interconnection provider's electric system for a period of six (6) or more cycles.

"Point of Common Coupling (PCC)" –means the point at which the interconnection between the interconnection provider's system and the interconnection customer's distributed resource interface occurs.

"Radial Distribution Circuit"–means a distribution line that branches out from a substation and is normally not connected to another substation or another circuit sharing the common supply of electric power.

"Transmission Line or System" means any electric line or system with a voltage of 69kV or higher.

"UL" means Underwriters Laboratory, Inc., an independent, not-for-profit product safety testing and certification organization operating in Canada, Europe, Asia, Latin America, and the U.S.A.

"Violation" means a condition on an electric transmission or distribution system that, based on established planning and operation standards, is considered unacceptable by the owner and/or operator of the system.

Section XXX.020 Purpose

This Part states the terms and conditions that govern the interconnection and parallel operation of distributed resources in order to give all Illinois electric customers the ability to utilize distributed resources.

Section XXX.030 Applicability

- a) All interconnection providers and interconnection customers are required to adhere to the provisions in this Part. The interconnection procedures in

this Part are available to interconnection customers proposing to interconnect distributed resources to the interconnection provider's electric distribution system. This Part applies to all distributed resource interconnections operating in parallel to an interconnection provider's electric system except those interconnections within the exclusive jurisdiction of the FERC. This Part does not apply to distributed resources that are operated in isolation from an electric system. [This part imposes requirements on the interconnection customers as well.]

- b) Neither these procedures nor the requirements included in this Part apply to distributed resources interconnected or approved for interconnection with electric systems prior to 60 business days after the effective date of this Part.

Section XXX.040 Terms of Interconnection

- a) The interconnection provider shall issue an interconnection agreement to the interconnection customer if:
 - 1) the interconnection provider receives a completed application from the interconnection customer in accordance with Section XXX.050; and
 - 2) the interconnection customer's proposed distributed resource meets the specifications in IEEE 1547-2003—(2003 edition, approved July 28, 2003, published by the Institute of Electrical and Electronics Engineers, Inc., 3 Park Avenue, New York, NY 10016-5997. No later amendments or additions are incorporated), as amended from time to time, and all other applicable codes and standards [The Distributed Resource must be held to all standards current at the time of application/construction, or else safety and/or reliability could be compromised.] and the interconnection customer passes the primary screening criteria in Section XXX.070 and/or secondary screening criteria in XXX.080; or
 - 3) the interconnection customer's proposed distributed resource undergoes a feasibility/impact study under Section XXX.110 and, if necessary, a facilities study under Section XXX.120 and the interconnection provider determines that the distributed resource can be interconnected safely and reliably following modifications to the interconnection provider's facilitiesElectric System (and the interconnection customer agrees to pay for such changes), modifications to an affected system, and/or modifications to the interconnection customer's facilities [The Interconnection Provider should not be advising the Interconnection Customer what changes

to the latter's equipment are needed. Moreover, with this in the rule, an agreement would be issued in every case.], or no modifications whatsoever.

- b) Any requirement by the interconnection provider for the interconnection customer's proposed interconnection to deviate from the specifications in IEEE 1547-2003 shall be fully explained and supported in a document that identifies the interconnection provider employee capable of responding to any inquiry regarding the requirement.

Section XXX.050 Application for Interconnection

- a) To assist an interconnection customer in the interconnection process and in accordance with Section XXX.140, the interconnection provider shall designate an employee or office from which information on the application process and on the interconnection provider's electric system shall be obtained through informal requests from the interconnection customer presenting a proposed project for a specific site. System information provided to interconnection customers shall include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the system. The interconnection provider shall comply with requests for such information if the interconnection customer agrees to comply with applicable confidentiality requirements.
- b) The interconnection customer shall submit an application to the interconnection provider's designated employee or office in the form in Appendix B for single-phase equipment 20 kVA or smaller, or in the form in Appendix C for single phase equipment larger than 20 kVA or for three-phase equipment of any size. Applications shall be submitted by electronic mail or fax so that they will be automatically date and time-stamped upon receipt. The original date and time-stamp applied to the application at the time of its original submission for interconnection shall be accepted as the qualifying date-and time-stamp for the purposes of any timetable in this Part. The interconnection provider shall issue a notification of receipt to the interconnection customer within three-five business days after receipt of the interconnection customer's application. The interconnection provider shall notify the interconnection customer, within ten business days after receipt of the application, that the application is either complete or incomplete.
- c) If the application is incomplete, the interconnection provider shall provide along with the notice that the application is incomplete, a list detailing all information necessary to complete the application. The interconnection customer shall have twenty business days after receipt of the notice to submit the listed information. If the interconnection customer does not

provide the listed information within the twenty business day deadline, the application shall be deemed withdrawn. An application shall be considered complete upon submission of the listed information to the interconnection provider.

- d) Certain applications may require minor modifications while being reviewed by the interconnection provider. Such minor modifications to a pending application shall not require the filing of a new application. Any proposed modification to machine data or equipment configuration or to the interconnection site of the distributed resource by the interconnection customer not agreed to in writing by the interconnection provider and the interconnection customer shall be deemed a withdrawal of the application and shall require submission of a new application. However, when it is mutually agreed that machine data or equipment configuration modifications shall have no significant effect on the distributed resource interconnection, the interconnection provider shall not require the interconnection customer to submit a new application.
- e) The interconnection provider shall treat the application and any communications concerning the nature of proposed distributed resource interconnection confidentially. The interconnection provider shall not use knowledge of proposed distributed resource projects submitted to it for interconnection or study to prepare competing proposals to the interconnection customer that offer either discounted rates in return for not installing the distributed resource, to offer competing proposals to install distributed resource, or for any purpose other than facilitating the application and interconnection processes. The interconnection provider shall not share any confidential information about proposed distributed resource interconnections with its affiliates or any party other than the interconnection customer, except as may be necessary to perform work necessary for the interconnection or to assure reliable functioning of the interconnection provider's electric system or affected systems or the applicable ISO/RTO.
- f) The interconnection provider shall process all applications in a non-discriminatory manner. Applications shall be processed in the order that they are determined to be complete.
- g) The interconnection customer shall submit proof of site control to the interconnection provider with its distributed resource interconnection application. Site control shall be demonstrated through:
 - 1) a recorded deed, recorded lease or recorded agreement proving ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing a distributed resource; or

- 2) a recorded option to purchase/acquire a site and/or a leasehold interest in a site for such purpose.
- h) ~~Interconnection provider shall assess no administrative charges to interconnection customer for handling the interconnection application. [To the extent that costs are legitimately incurred, the Commission must allow for their recovery. While the Commission could specify that these cost be recovered from all ratepayers, ComEd is not recommending that approach.]~~
- i) Submissions and notices under this Section shall be satisfied by electronic mail, facsimile, U.S. Mail, or another mutually agreed upon method.

Section XXX.060 Initial Review

- a) Within ~~fifteen~~ 20 business days after the interconnection provider notifies the interconnection customer of receipt of a completed application, the interconnection provider shall perform an initial review using the primary and secondary screening criteria set forth in Section XXX.070 and Section XXX.080 respectively. Upon completion of the initial review, the interconnection provider shall provide written notification to the interconnection customer of the results in accordance with Section XXX.090. The notification shall include copies of the initial review results, analysis, and data underlying the interconnection provider's determinations under the screens.
- b) ~~Interconnection providers shall file tariffs that include rates for the initial review. These rates shall be differentiated by the nameplate capacity of the generator being interconnected and characteristics of the circuit at the proposed point of interconnection. The interconnection provider shall keep a current list for the labor and rates applicable to performing the initial review. [There are many variations in proposed interconnection arrangements that would affect the total cost of this work – not only the size of the resource, but also the line voltage and the amount of load on the line segment. The interconnection customer should just pay for the amount of cost it causes and that should be determined on a case-by-case basis.]~~

Section XXX.070 Primary Screening Criteria

The primary screens required in this section include the following:

- a) For interconnection of a proposed distributed resource to a radial distribution circuit, the aggregated generation capacity, including the proposed distributed resource generation capacity, on the circuit shall not exceed 5% of the total circuit annual peak load, or 20% of the total circuit annual minimum load, whichever is less, as most recently measured at the substation-; nor shall it exceed 5% of a distribution circuit line section annual peak load, or 20% of the distribution line section annual minimum load whichever is less. (The matches the logic used in the secondary screen. Ability to island is a function of the load on the affected circuit line section not necessarily the total circuit).
- b) For interconnection of a proposed distributed resource to the line or (Distributed Resources on the line side of network protectors can cause cycling of network protectors or out of phase switching of network protectors. It is not as easy to see as it is for distributed resources on the load side of the protector, but it certainly can occur. Thus, it is ComEd's belief that connection to the load side of a network protector circuit should be evaluated with a feasibility study. Adding the words "line or" emphasizes this.) load side of spot network protectors, the proposed distributed resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5% of a spot network's maximum load or 50 kW.
- c) The proposed small resource shall not be connected on the line or load side of a secondary network protector, except as allowed under subsection (b) for a spot network.
- d) The proposed distributed resource, in aggregation with other generation on the distribution circuit, shall not contribute more than 10% to the distribution circuit's maximum short circuit current at the point on the high voltage (primary) level nearest the proposed point of common coupling.
- e) The proposed distributed resource, in aggregate with other generation on the distribution circuit, shall not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line reclosers), or interconnection customer equipment on the system to exceed 85% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 85% of the short circuit interrupting capability.
- f) The proposed distributed resource, in aggregate with other generation interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the interconnection customer proposes to interconnect the distributed resource, shall not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical

vicinity (e.g., 3 or 4 voltage level busses from the voltage at the point of interconnection).

- g) For interconnection of a proposed single-phase distributed resource to a primary distribution system that is three-phase, four-wire, the distributed resource shall be connected line-to-neutral. For interconnection of a proposed single-phase distributed resource to a primary distribution system that is three-phase, three-wire, the distributed resource shall be connected line-to-line. At any point of common coupling, the single-phase distributed resource connected shall not exceed the greater of 10% of the minimum feeder load or 167 kVA.
- h) For interconnection of a proposed three-phase distributed resource to a three-phase four-wire distribution circuit or a distribution circuit having mixed three-wire and four-wire sections, the aggregate generation capacity including the proposed distributed resource shall not exceed 10% of line section peak load.
- i) If the proposed distributed resource is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed distributed resource, shall not exceed 20 kVA.
- j) If the proposed distributed resource is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.
- ~~k) k)~~ The proposed distributed resource's point of common coupling shall not be on a transmission line and shall not be an automatic source transfer switch or similar device. [If an interconnection customer is connected via automatic transfer equipment, the customer essentially has two or more line service. The interconnection provider must decide with the -interconnection customer if the Distributed Resource is going to be configured to be able to connect to any line or one line and make appropriate circuit modifications based on that decision.]
- l) If the proposed distributed resource's point of common coupling is a circuit with a configuration other than those described in primary screens a through k, it does not meet the primary screening criteria. This statement will cover more complicated circuit configurations that may require more study, such as lines with multiple source stations (i.e. 34 lines can be 2 or 3 terminal lines, multi-terminal 34 lines used distance relays which may need greater reaches with distributed resources and thus may limit line loadability).

The secondary screens include the following:

- a) For interconnection of a proposed distributed resource to a radial distribution circuit, the new distributed resource's capacity in aggregate with other generation on the circuit shall not exceed 15% of total circuit peak load, or 50% of the total circuit annual minimum load, whichever is less, as most recently measured at the substation; nor shall it exceed 15% of a distribution circuit line section annual peak load, or 50% of the distribution line section annual minimum load, whichever is less.
- b) For interconnection of a proposed distributed resource to the load side of spot network protectors, the proposed distributed resource shall utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5% of a spot network's maximum load or 50 kW.
- c) ~~For the interconnection of a proposed distributed resource to any network, the distributed resource must utilize a protective scheme that ensures that its current flow shall not affect the network protective devices including reverse power relays or a comparable function. As in the case of the primary screen, connections to the load side of the network should be removed by the screen. Because of the complexity of the required protective arrangements, those cases should proceed to the feasibility study stage. [The statement that reverse power relays or a comparable function ensures that current flow shall not affect the network protective devices is too vague. For instance, a reverse power relay with an inadequate pickup setting or time delay setting may never operate. A single reverse power relay may fail and consequently would not function to ensure that network devices are not affected, and so on. This attempts to define a design that will ensure that network protective devices are unaffected and is not detailed enough to do so. Attempting to specify a specific design for a specific application is beyond the scope of this section.]~~ Synchronous distributed resources shall not be interconnected to a network.
- d) For interconnection of a proposed distributed resource ~~that is an induction generator~~ [Synchronous and induction generators are equivalent in their ability to generate power and voltage in an islanded situation and to exceed the capabilities of network protectors.] ~~or that utilizes inverter-based protective functions, both of which include reverse power relay functions [The key element here is that the Distributed Resource uses an inverter to connect to the system. An induction machine can self-excite and exceed the ratings of network protection equipment; a UL1741 inverter-based machine system cannot generate without being connected to the system]~~ the distributed resource's total net generating capacity, in

aggregate with other distributed resources interconnected on the line or load side of network protective devices, does not exceed the lesser of 10% of the minimum load on the network or 50 kW. A distributed resource ~~does shall~~ [Rather than attempting to state a fact which may or may not be true, this should be stated as a restriction.] not export to any network.

- e) The proposed distributed resource, in aggregation with other generation on the distribution circuit, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.
- f) The proposed distributed resource *in aggregate* with other generation on the distribution circuit shall not cause any distribution equipment, protective devices (including but not limited to substation breakers, fuse cutouts, and line reclosers), or interconnection customer equipment on the system to exceed 90% of their short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds the 90% short circuit interrupting capability limit.
- g) The proposed distributed resource's point of common coupling shall not be on a transmission line and shall not be an automatic source transfer switch or similar device.

Section XXX.090 Results of Initial Review

- a) If the initial review determines that the proposed interconnection passes the primary screening criteria, then the interconnection application shall be approved and the interconnection provider shall issue the interconnection customer an executable interconnection agreement within ten business days after the determination.
- b) If the initial review determines that the proposed interconnection passes the secondary screening criteria and fails the primary screening criteria, then:
 - 1) the interconnection provider shall determine through the initial review that the distributed resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, and the interconnection provider shall issue the interconnection customer an executable interconnection agreement within ten business days after the determination; or
 - 2) ~~the interconnection provider shall determine from the initial review that the distributed resource cannot be interconnected consistent~~

~~with safety, reliability, and power quality standards unless the interconnection customer is willing to consider modifications to the distributed resource. The interconnection provider shall describe, in writing or through electronic mail within 10 business days after the determination, the issues to be addressed prior to the distributed resource interconnection. The interconnection provider shall include copies of data and analyses results underlying the interconnection provider's determination of the need for distributed resource modifications. Within thirty business days of receipt of interconnection provider's list of issues to be addressed, the interconnection customer shall provide written notification agreeing to address the issues raised by the interconnection provider. The interconnection provider shall forward an executable interconnection agreement to the interconnection customer within 10 business days after receipt of confirmation that the interconnection customer has agreed to make the necessary changes to the interconnection customer's facilities at the interconnection customer's cost; or~~The interconnection provider should not be recommending changes to the customer's distributed resource. The interconnection provider's role is to determine and notify the customer of any modifications required on the interconnection provider's system, or to the customer's electrical facilities (such as relays), but not modifications to the distributed resource itself. The former is adequately addressed in other provisions of this rule.]

- 3) the interconnection provider shall determine from the initial review that the distributed resource cannot be interconnected consistent with safety, reliability, and power quality standards unless the interconnection customer is willing to consider modifications to the interconnection provider's system or facilities. The interconnection provider shall recommend, in writing or through electronic mail within ~~ten~~30 business days after the determination, system or facility modifications necessary for the interconnection customer to interconnect with the interconnection provider's system. These recommendations shall include copies of data and analyses underlying the interconnection provider's determination of the need for system or facilities modifications, a detailed explanation of the necessary system or facility modifications, an estimated time for the completion of the system or facility modifications and ~~an~~ a single estimate of the cost to complete the system or facility modifications. The interconnection provider shall provide the interconnection customer with the option to pay the cost estimate to the interconnection provider with or without a final true up to actual costs. Within thirty business days of receipt of interconnection provider's notice of the need for modifications and cost estimate,

the interconnection customer shall issue payment to the interconnection provider for the system or facility modifications in order to be considered for interconnection. At that time, the interconnection customer shall also choose either a binding cost estimate or a cost estimate with final true up. The interconnection provider shall forward an executable interconnection agreement to the interconnection customer within 10 business days of receipt of payment from interconnection customer for system or facility modifications.

- c) If the initial review determines that the proposed interconnection fails both the primary and the secondary screening criteria, then the proposed interconnection shall be addressed under Section XXX.100 – Scoping Meeting.

Section XXX.100 Scoping Meeting

A scoping meeting shall be made available by the interconnection provider to an interconnection customer whose application fails both the primary and secondary screening criteria.

- a) At the request of either party, a scoping meeting shall be held within 10 15 business days, or as otherwise mutually agreed to by the parties, after the interconnection provider notifies the interconnection customer that the application fails both the primary and secondary screening criteria. The interconnection provider and interconnection customer shall bring to the scoping meeting, or make available via teleconferencing, personnel, including system engineers, and other resources required to accomplish the purpose of the meeting.
- b) The purpose of the scoping meeting shall be to discuss the interconnection customer's interconnection request and to review existing non-confidential studies and information relevant to the interconnection customer's proposed interconnection. The parties shall further discuss whether the interconnection provider should perform a feasibility/impact study in accordance with Section XXX.110. The scoping meeting may be omitted by mutual agreement. If the scoping meeting is omitted, then the interconnection customer shall either withdraw the application for interconnection or the interconnection provider shall issue a feasibility/impact study to interconnection customer in accordance with Section XXX.110.

Section XXX.110 Feasibility/Impact Study

The feasibility/impact study shall identify the effect(s) of interconnecting the distributed resource to the interconnection provider's system, including identification of potential violations caused by the interconnection, the effect the interconnection would have on system reliability, and to assist in the determination of a cost estimate for any facility modifications required for interconnection.

- a) No later than ~~five~~ten business days after holding a scoping meeting or mutually agreeing to omit the scoping meeting, interconnection provider shall issue a feasibility/impact study agreement that includes an outline of the scope of the study and a cost estimate to perform the feasibility/impact study. The feasibility/impact study agreement shall provide the interconnection customer with the option to designate the cost estimate or choose a final true up of the cost estimate with actual costs upon completion of the study. The cost estimate shall include a summary of the estimated professional time necessary to complete the feasibility/impact study. Whenever possible, the interconnection provider shall rely on existing studies of recent vintage to model interconnection conditions. The cost estimate shall not include the cost of existing studies; however, the cost estimate shall include an estimate of the cost of any new study or modifications to existing studies necessary to perform the feasibility/impact study.
- b) Within thirty business days of receipt of the feasibility/impact study agreement or another mutually agreed upon time frame, interconnection customer shall return an executed feasibility/impact study agreement along with payment of the estimated cost of the feasibility/impact study. The interconnection customer shall also indicate whether payment is for a binding cost estimate or subject to a final true up with actual costs upon completion of the study. If the interconnection customer chooses a cost estimate with true up, then the interconnection provider shall refund or collect the difference between the estimated and actual cost without interest by issuing a refund or ~~receipt~~invoice for payment with the completed feasibility impact study.
- c) The feasibility/impact study shall include the following analyses:
 - 1) Short circuit analysis: including identification of any equipment short circuit capability limits exceeded as a result of the interconnection;
 - 2) Power flow analysis: including identification of any potential thermal overload or voltage limit violations resulting from the interconnection;
 - 3) Voltage drop and flicker analysis: including an examination of the expected magnitude and frequency of occurrence;

- 4) Protection analysis: Including coordination studies and identification of necessary changes in equipment, coordination set points, and/or grounding requirements as a result of the interconnection; and
 - 5) Cost estimate for any system or facility modifications and a time estimate for completion of such modifications, including a description of all facility and/or system modifications required to interconnect the distributed resource to the interconnection provider's system. The interconnection provider shall describe all functional deficiencies identified that may help the interconnection customer to address potential violations. The estimate shall itemize costs to address all potential violations that are a direct result of the interconnection, including short circuit, power flow, voltage, and protection issues.
- d) The feasibility/impact study shall consider all generating facilitiesdistributed resources that, when the feasibility/impact study is performed:
- 1) are directly interconnected to the electric power-distribution system, or
 - 2) are interconnected to affected systems and may have an impact on the interconnection request, or
 - 3) have a pending higher queued interconnection application or a signed and valid interconnection agreement to interconnect to the interconnection provider's electric system.
- e) A feasibility/impact study shall consider interconnection of the distributed resource based on its initial indicated purpose.
- f) If so requested by the interconnection customer at the time of the initial interconnection request, a feasibility/impact study shall consider multiple potential points of interconnection at a proposed project site, at the interconnection customer's cost. If the interconnection customer requests a feasibility/impact study of additional potential points of interconnection after the studies of those in the initial interconnection request have been completed, then the additional requests shall require submission of a new interconnection application.
- g) Within 45 business days after the date an authorized feasibility/impact study agreement and payment of cost estimate are received from the interconnection customer, the interconnection provider shall transmit a feasibility/impact study report to the interconnection customer that details

the results of the feasibility/impact study and includes, if requested by the interconnection customer when the feasibility/impact study was executed, a true up of the difference between the actual and estimated cost to perform the feasibility/impact study.

- 1) In instances where the feasibility/impact study shows no potential for electric system violations, the interconnection provider shall within ~~five-ten~~ business days send the interconnection customer either a facilities study agreement, in accordance with Section XXX.120 or an interconnection agreement in the event that no facilities study is required for interconnection.
- 2) In instances where a feasibility/impact study shows potential for violations on electric systems that are operated by the interconnection provider, the required remedial action(s) and the estimated cost of taking such remedial action(s), including an assignment of costs responsibilities, shall be included in the feasibility/impact study report. If necessary, the interconnection provider shall send the interconnection customer a facilities study agreement in accordance with Section XXX.120.
- 3) When the interconnection provider determines the potential for violations on an affected system, the interconnection provider shall include in the feasibility/impact study report the contact information for each affected system. ~~The interconnection provider shall include a cost estimate to coordinate the distributed resource project with each affected system with potential for violations if coordination of the affected system study is an option under the rules, regulations, laws, or procedures governing the affected system operator. If coordination is an option, then the interconnection customer shall respond to the interconnection provider's notification within five business days, stating whether the interconnection provider is to act as liaison between the interconnection customer and each affected system that shows a potential for violations. [Utilities should not be forced to act as a liaison between the interconnection customer and other systems, in effect working for the interconnection customer. This would put the interconnection provider in the difficult and conflict-laden position of arguably having to advocate on behalf of the interconnection customer in discussions with the affected system operator about changes that are required to accommodate the interconnection and which would be charged to the interconnection customer.]~~
 - A) ~~If the interconnection customer notifies the interconnection provider it is to act as liaison between the interconnection customer and the affected system, within twenty business~~

~~days after receipt of notification, the interconnection provider shall inform the affected system of the distributed resource, in accordance with interconnection notification protocols and the rules, regulations, laws, or procedures governing the affected system operator.~~

- B) ~~Within five business days from the interconnection provider's notification of a potential for violations on an affected system, the interconnection provider shall send the interconnection customer an affected system study agreement, including an outline of the responsibilities of interconnection provider and interconnection customer in coordinating the affected system study with the affected system operator and an estimate of the cost of the affected system study. [Because of the need to involve the operator of the affected system, it is unlikely that the IP would be able to provide an estimate in 5 days.] In order to remain under consideration for interconnection, the interconnection customer must return an executed affected system study agreement and reimburse interconnection provider for any charges assessed by affected system operator within 20 business days of interconnection provider's receipt of charges from affected system operator.~~
- C) ~~The interconnection provider shall coordinate the affected system study, and shall attempt to convey results to the interconnection customer within 45 business days after receipt of the authorized affected system study agreement and deposit payment.~~
- D) ~~No later than 30 days after receipt of the results of the affected system study from interconnection provider, the interconnection customer must notify the interconnection provider of its intention to proceed. If the interconnection customer chooses to proceed, the interconnection provider shall send the interconnection customer a facilities study agreement in accordance with Section XXX.120 or an interconnection agreement.~~
- 4) Where a feasibility/impact study indicates potential for affected system violations, and the interconnection customer ~~decides to~~ coordinates all aspects of the distributed resource interconnection with the affected system, the interconnection customer must apply to the affected system, within twenty business days, in accordance with regulations that govern interconnections to the affected system. The interconnection customer shall cause the

interconnection provider to receive a copy of the affected system's study results as soon as they are available. Within 30 business days after receipt of the results of the affected system study, the interconnection customer must notify the interconnection provider of its intention to proceed. If the interconnection customer chooses to proceed, the interconnection provider shall send the interconnection customer a facilities study agreement in accordance with Section XXX.120 or an interconnection agreement.

Section XXX.120 Facilities Study

- a) The facilities study determines the need for specific modifications to the electric system(s) necessary to interconnect the distributed resource and the cost of any necessary modifications. ~~The interconnection provider shall also suggest alternative approaches to the interconnection customer's proposed distributed resource interconnection if the interconnection provider identifies alternative approaches that would reduce interconnection costs or provide other benefits. [The interconnection provider should not be required to function as the interconnection customer's consultant.]~~ If the feasibility/impact study determines that no electric system interconnection facilities are required, the facilities study shall not be required, and the project shall proceed directly to the execution of an interconnection agreement.
- b) A facilities study agreement shall be transmitted to the interconnection customer with the feasibility/impact study report. The facilities study agreement shall include an outline of the scope of the study and an estimate of the costs to perform the facilities study. The cost estimate shall include a summary of the estimated professional time necessary to complete the facilities study. The facilities study agreement shall provide the interconnection customer with the option to designate the cost estimate as binding or choose a final true up of the cost estimate with actual costs upon completion of the study. Within 30 business days of receipt of the facilities study agreement, the interconnection customer must return an executed facilities study agreement with payment of the estimated cost of the facilities study. The interconnection customer shall also indicate whether payment is for a binding cost estimate or subject to a final true up with actual costs upon completion of the study.
- c) High voltage transmission system and/or electric power distribution system interconnection design for any required interconnection facilities and/or system modifications shall be performed under a facilities study agreement between the interconnection customer and the interconnection provider. The interconnection provider may contract with consultants,

including contractors acting on behalf of the interconnection provider, to perform some or all of the activities required under the facilities study agreement. The interconnection customer and the interconnection provider may reach agreement allowing the interconnection customer to separately arrange for the design of some or all of the required interconnection facilities. If the interconnection customer arranges for the design of some or all of the required interconnection facilities, facility design shall be reviewed and/or modified prior to acceptance by the interconnection provider, under the provisions of the facilities study agreement. If the parties agree to separately arrange for design and construction, the interconnection provider shall make sufficient information available to the interconnection customer to permit the interconnection customer to obtain an independent design and cost estimate for any necessary facilities.

- d) Whether system upgrades are required or the required facilities are limited to interconnection facilities, the facilities study shall be completed within 45 business days after the interconnection provider's receipt of an executed facilities study agreement.
- e) Where system modifications or additional interconnection facilities are required to permit the interconnection of a distributed resource, the interconnection customer shall bear the cost of the system upgrades or interconnection facilities as determined by the facilities study. ~~The interconnection customer may be credited for the cost of system or facility modifications or such costs may be offset by mutual agreement with subsequent interconnection customers, or by other laws, rules, tariffs, or billing experiments.~~ [To the extent that this is permissive, it is unnecessary. Subsequent interconnection customers always have the option to agree to reimburse a prior interconnection customer for system changes that benefit them – if, in fact, such cause and effect can be determined. However, to require such crediting would require what may be an impossible causal determination when multiple system changes intervene. Current practice at ComEd is to bill the system changes to the party that causes them to be made. Subsequent parties whose service/interconnection arrangement needs no system modification are not charged because they didn't cause the cost to be incurred.]
- f) An interconnection provider may propose to group facilities required for more than one interconnection customer addition in order to minimize facilities costs through economies of scale, but any interconnection customer may require the installation of facilities required for its own system if it is willing to pay the costs of those facilities.

~~No later than 30 days after the effective date of this Part as amended, each interconnection provider shall file a tariff or tariffs for interconnection and parallel operation of distributed resources in conformance with the provisions of this Part. The utility shall file a new tariff or a modification of an existing tariff. Any modifications of existing tariffs or new tariff filings relating to this section shall be consistent with this Part. Concurrent with the tariff filing required by this section, each utility shall submit:~~

- ~~a) an initial review fee schedule and all supporting cost data for the fees;~~
- ~~b) an interconnection agreement in form of the agreement attached as Appendix A; and~~
- ~~c) standard applications for interconnection and parallel operation of distributed generation in the form of the applications in Appendices B and C.~~

[We suggest that all relevant information be made available in written or electronic form. For example, information is currently made available to potential Interconnection customers by ComEd via its "Guidelines for the Interconnection of Distributed Generation to the ComEd System" (the "DG Book"). This information is available on ComEd's website and has been provided to the Commission Staff. This process permits timely modifications to meet the needs of the parties while at the same time providing transparency and the opportunity for Commission review.]

Section XXX.140 Designation of Interconnection Provider Contact Persons

- a) The interconnection provider and interconnection customer shall designate a person or persons who shall serve as their respective interconnection contacts for all matters related to distributed resource interconnection.
- b) Each interconnection provider shall identify its distributed resource contact person to the Illinois Commerce Commission's Director of the Consumer Services Division and Director of the Energy Division.
- c) Each interconnection provider shall provide convenient access through its Internet web site to the names, telephone numbers, mailing addresses and electronic mail addresses of its distributed resource contact employees or office.

Section XXX.150 All Reasonable Efforts

The interconnection provider shall make all reasonable efforts to meet all time frames provided in this Part unless the interconnection provider and the interconnection customer mutually agree to a different schedule. The interconnection provider shall make all reasonable efforts to complete system modifications on or before the estimated deadline for completion. ~~If an interconnection provider cannot meet a deadline provided~~

~~in this Part, including deadlines provided in agreements, it shall notify the interconnection customer in writing no later than three business days after the deadline has passed. The notification shall explain the reason for the failure to meet the deadline and provide an estimated time by which it shall complete the applicable interconnection procedure. The interconnection provider shall also include the notification as well as any other relevant materials in an informational filing with the Illinois Commerce Commission no later than seven business days after notification is provided to the interconnection customer. Informational filings shall be filed with the Chief Clerk's Office and copies shall be sent to the Director of the Consumer Services Division and the Director of the Energy Division. [These filings are themselves time consuming and unnecessary. In most cases the interconnection provider and the interconnection customer are in constant communication about the project. Additionally, project delays can be due to other problems the interconnection customer is experiencing, and not due to delays on the part of the interconnection provider.]~~

Section XXX.160 Metering

Any metering necessitated by the use of the distributed resource shall be installed in accordance with state regulatory requirements and interconnection provider's electric tariffs. Unless mutually agreed to between interconnection customer and interconnection provider, interconnection provider shall not require installation of a meter ~~that registers the output of a~~ distributed resource ~~s~~ with a nameplate capacity rating of 100 KW or less at a single installation.

Section XXX.170 Installation, Commissioning, and Testing

- a) Within 20 business days of the execution of an interconnection agreement, the interconnection customer shall provide the interconnection provider with an estimate of the date on which the distributed resource shall be operational. The estimated date shall be no later than the latter of 18 months after the date that the interconnection agreement was executed or 18 months after the date that system or facility modifications were completed by the interconnection provider. Installation of the interconnection customer's distributed resource shall be completed as specified in the standardized application, the interconnection agreement, and any studies indicating a need to modify the interconnection customer's distributed resource. The interconnection customer shall inform the interconnection provider in writing when the installation of the distributed resource is complete. If the customer fails to install and inform the interconnection provider of the installation within the time limits specified in this subsection, the interconnection customer must reapply for interconnection before interconnection can take place unless an extension on the deadline to interconnect is mutually agreed to between the interconnection customer and the interconnection provider. However,

failure of the interconnection customer to meet the estimated date of operation shall not require reapplication for interconnection.

- b) Commissioning tests of an interconnection customer's installed distributed resource shall be performed pursuant to applicable codes and standards. The interconnection provider shall list all testing requirements in the interconnection agreement. The interconnection customer shall give the interconnection provider 40_65 business days written notice, or another mutually agreed upon timeframe, of the tests. Interconnection provider shall have the right to be present to complete the interconnection, inspect the interconnection customer's distributed resource for compliance with applicable codes and standards, and witness the commissioning tests. ~~The interconnection provider shall assess no charges related to the initial inspection.~~[The interconnection provider should be able to recover these costs. These inspections, which might take up to several days, are helpful to both the interconnection provider and interconnection customer and have avoided future problems for the interconnection customer.]
- c) If the inspection of the interconnection customer's distributed resource does not result in a finding that the distributed resource is in compliance with applicable codes and standards and the executed agreement, the interconnection provider shall provide written notification to the interconnection customer explaining why the distributed resource was not in compliance within five business days of the inspection. Within 30 business days of notification of non-compliance or another mutually agreed upon time, the interconnection customer shall address the non-compliance and notify the interconnection provider that it is prepared for another inspection.
- d) The interconnection provider shall test interconnection customer equipment no more frequently than it tests its own equipment. This shall not obligate the interconnection provider to test the interconnection customer's equipment.

Section XXX.180 Reporting Requirements

- a) Each interconnection provider shall maintain records concerning applications received for interconnection and parallel operation of distributed generation. Such records shall include the date each application is received, all documents generated in the course of processing each application, correspondence regarding each application, and the final disposition of each application.
- b) ~~The interconnection provider shall make available information, including single-line diagrams of all existing interconnections unless the diagrams~~

~~are redundant, other details of existing interconnections, and generic single-line diagrams, on the interconnection provider's Internet web site. Such information shall include, but not be limited to, the number, type, and location of relays, voltage level at the point of interconnection and on adjacent lines, size and type of generator, metering, and inverters. Nothing shall preclude the interconnection customer from submitting, and the interconnection provider from approving, interconnection applications that propose interconnections that vary from the information listed on the interconnection provider's web site.~~[Interconnection providers should not be required to put this information out for public view. There are legitimate security concerns about making such information freely available, as well as disclosing sensitive customer information that could be subject to abuse.]

Section XXX.190 Complaint Procedures

Complaints alleging violations of this Part shall be filed pursuant to 83 Ill. Adm. Code 200.